



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

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September 19, 2002

Mr. Charles Hartsell
Deercroft Recycling and Disposal Facility
10501 West 300 North
Michigan City, Indiana 46360

Re: 091-16111-00067
First Minor Source Modification to:
Part 70 permit No. T091-7519-00067

Dear Mr. Hartsell:

Deercroft Recycling and Disposal Facility was issued Part 70 operating permit T091-7519-00067 on July 12, 1999 for a municipal solid waste landfill. An application to modify the source was received on June 11, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) open flare, with a maximum heat input capacity of 55 MMBtu per hour and the flow rate of 1,800 standard cubic feet per minute (scfm) of landfill gas, constructed in 2002.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The source may begin construction when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/YC

cc: File - LaPorte County
LaPorte County Health Department
Northwest Regional Office
Air Compliance Section Inspector - Rick Massoels
Compliance Data Section - Karen Nowak
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner



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PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

Deercroft Recycling & Disposal Facility 10501 W. 300 North Michigan City, Indiana 46360

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T091-7519-00067	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: July 12, 1999 Expiration Date: July 12, 2004

First Reopening No.: R 091-13376-00067, issued January 7, 2002

First Minor Source Modification No.: 091-16111-00067	Pages Affected: 1, 3
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 19, 2002



SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary municipal solid waste landfill (MSLWLF)

Responsible Official: Charlie Hartsell
Source Address: 10501 W. 300 North, Michigan City, Indiana 46360
Mailing Address: 10501 W. 300 North, Michigan City, Indiana 46360
SIC Code: 4953
County Location: LaPorte
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD Rules
Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units:

- (a) One (1) solid waste disposal facility having the meaning described in 40CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads), and improvements on the land used for disposal of solid waste that opened in 1980 and has a design capacity of 8,257,892 Megagrams.
- (b) One (1) flare with a capacity of 30 MMBtu per hour, constructed in 1994.
- (c) Three (3) landfill gas fueled reciprocating engine/generator sets rated at 1138 break horsepower each, installed in 1994, and one (1) landfill gas fueled reciprocating engine/generator set rated at 1138 break horsepower to be installed.
- (d) One (1) open flare, with a maximum heat input capacity of 55 MMBtu per hour and the flow rate of 1,800 standard cubic feet per minute (scfm) of landfill gas, constructed in 2002.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (b) Space heaters, process heaters, or boilers using the following fuels:
 - (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

- (2) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (c) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (d) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.
 - (1) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids
- (e) Equipment used exclusively for the following:
 - (1) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (f) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.
- (g) Paved and unpaved roads and parking lots with public access.
- (h) Purging of gas lines and vessels that is related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (i) Emergency generators as follows:
 - (1) Diesel generators not exceeding 1600 horsepower.
- (j) Other activities or categories not previously identified:
 - (1) Crankcase Breather Vent
 - (2) Leachate Storage Tank
 - (3) Passive Gas Flare
- (k) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (b) It is a major source, as defined in 326 IAC 2-7-1(22);
- (c) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) solid waste disposal facility having the meaning described in 40CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads), and improvements on the land used for disposal of solid waste that opened in 1980 and has a design capacity of 8,257,892 Megagrams.
- (b) One (1) flare with a capacity of 30 MMBtu per hour, constructed in 1994.
- (c) Three (3) landfill gas fueled reciprocating engine/generator sets rated at 1138 break horsepower each, installed in 1994, and one (1) landfill gas fueled reciprocating engine/generator set rated at 1138 break horsepower to be installed.
- (d) One (1) open flare, with a maximum heat input capacity of 55 MMBtu per hour and the flow rate of 1,800 standard cubic feet per minute (scfm) of landfill gas, constructed in 2002.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A] and to HAPs [326 IAC 14-1-1][40 CFR Part 61, Subpart A]

- (a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW.
- (b) The provisions of 40 CFR Part 61, Subpart A - General Provisions, which are incorporated as 326 IAC 14-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 61, Subpart M.

D.1.2 Non-applicability Determination

The municipal solid waste landfill is not subject to the provisions of the following 40 CFR Part 60 Subparts: Cc, D, Da, Db, Dc, E, Ea, Eb, K, Ka, Kb, O, GG, and OOO.

D.1.3 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40CFR 60.752, Subpart WWW]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall comply with 40CFR 60.752 (b)(2)

D.1.4 Operational Standards for Collection and Control Systems [40CFR 60.753]

In order to comply with 40 CFR 60.752 (b)(2)(ii) the Permittee shall:

- (1) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 2 years or more if closed or at final grade.
- (2) Operate the collection system with negative pressure at each wellhead except under the following conditions:
 - (a) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40CFR 60.757(f)(1).
 - (b) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.

- (c) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Office of Air Quality (OAQ).
- (3) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55EC and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
 - (a) The nitrogen level shall be determined using Method 3C, unless an alternative method is established as allowed by 40CFR 60.752 (b)(2)(i).
 - (b) Unless an alternative test method is established as allowed by 40CFR 60.752 (b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A except that; the span shall be set so that the regulatory limit is between 20 and 50 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; the allowable sample bias, zero drift, and calibration drift are ± 10 percent.
- (4) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.
- (5) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.
- (6) Operate the control system at all times when the collected gas is routed to the system.
- (7) If monitoring demonstrates that the operational requirements in 40CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40CFR 60.755(a)(3) through (5) or 40CFR 60.755(c). If corrective actions are taken as specified in 40CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40CFR 60.753.

D.1.5 NESHAP for Asbestos Active Waste Disposal Sites [40 CFR 61.154]

In order to comply with 40 CFR 61.154 the Permittee must comply with the following:

- (1) allow no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or comply with (2) or (3) below.
- (2) At least once every 24-hour period, asbestos-containing waste material that has been deposited during the previous 24-hour period must:

- (a) be covered with at least 15 centimeters (6 inches) of compacted nonasbestos containing material, or
 - (b) be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. Any used, spent, or other waste oil is not considered a dust suppression agent.
- (3) Use an alternate emissions control method that has received prior written approval by the Administrator.
 - (4) Also, unless a natural barrier deters access by the general public, warning signs and fencing must be installed or the requirements of paragraph (2)(a) above must be met.

D.1.6 Equipment Requirements

The equipment shall be operated and maintained in accordance with the manufacturer's specifications.

Compliance Determination Requirements

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [40CFR 60.754(b)]

- (a) After installation of a collection and control system in compliance with 40CFR 60.755, the Permittee shall calculate the non methane organic compound (NMOC) emission rate for purposes of determining when the system can be removed using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

- (1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40CFR 60.
- (2) The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40CFR 60. If using Method 18 of Appendix A of 40CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25C of Appendix A of 40CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.
- (3) The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Office of Air Quality (OAQ).

(b) Pursuant to 40 CFR 60.754(d):

For the performance testing required in 40CFR 60.752(b)(2)(iii)(B), Method 25 or Method 18 of appendix A of 40CFR 60 shall be used to determine compliance with 98% reduction weight percent efficiency of NMOC from the control device or the 20 ppmv hexane on a dry basis at 3% oxygen outlet concentration level, or if the control device is an open flare, 40 CFR 60.18 procedures can be used, unless another method to demonstrate compliance has been approved by the Office of Air Quality (OAQ) as provided by 40CFR 60.752(b)(2)(i)(B). If using Method 18 of appendix A, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

NMOC_{in} = mass of NMOC entering the control device

NMOC_{out} = mass of NMOC exiting control device

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.8 Monitoring [40CFR 60.756]

Except as provided in 40CFR 60.752(b)(2)(i)(B),

- (1) The Permittee seeking to comply with 40CFR 60.752(b)(2)(ii)(A) for an active gas collection shall install a sampling port and a thermometer, other temperature measuring device or an access port for temperature measurements at each wellhead and:
 - (a) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40CFR 60.755(a)(3);
 - (b) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40CFR 60.755(a)(5); and
 - (c) Monitor temperature of the landfill gas on a monthly basis as provided in 40CFR 60.755(a)(5).
- (2) The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:
 - (a) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius of ± 0.5 EC, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.
 - (b) A device that records flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

- (3) The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
- (a) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame
 - (b) A device that records flow to or bypass of the flare.
- The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- (4) The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40CFR 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Quality (OAQ) shall review the information and either approve it, or request that additional information be submitted. The Office of Air Quality (OAQ) may specify additional monitoring procedures.
- (5) The Permittee seeking to install a collection system that does not meet the specifications in 40CFR 60.759 or seeking to monitor alternative parameters to those required by 40CFR 60.753 through 40CFR 60.756 shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40CFR 60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Quality (OAQ) may specify additional appropriate monitoring procedures.
- (6) The Permittee seeking to demonstrate compliance with 40CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40CFR 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

D.1.9 Compliance Provisions [40CFR 60.755]

- (1) Except as provided in 40CFR 60.752(b)(2)(i)(B), the specified methods below shall be used to determine whether the gas collection system is in compliance with 40CFR 60.752(b)(2)(i).
- (a) For the purpose of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_0 kinetic factors should be those published in the most recent Compilation of Air Pollution Emission Factors (AP-42) or other site-specific values demonstrated to be appropriate and approved by the Office of Air Quality (OAQ). If k has been determined as specified in 40CFR 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover

equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_o R (e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.

c = time since closure, years (for an active landfill $c = 0$ and $e^{-kc} = 1$)

For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^n k L_o M_i (e^{-kt_i})$$

where,

Q_M = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, year⁻¹

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} section, megagrams

t_i = age of the i^{th} section, years

If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in 40CFR 60.755(a)(1)(i) and (ii). If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in 40CFR 60.755(a)(1)(i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

- (b) For the purposes of determining sufficient density of gas collector for compliance with 40CFR 60.752 (b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Office of Air Quality (OAQ), capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.
- (c) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40CFR 60.752(b)(2)(ii)(A)(3), the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days, except for the three conditions allowed under 40CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

- (d) The Permittee is not required to expand the system as required in 40CFR 60.755(a)(3) during the first 180 days after gas collection system start-up.
 - (e) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40CFR 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.
 - (f) If the Permittee seeks to demonstrate compliance with 40CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40CFR 60.759 shall provide information satisfactory to the Office of Air Quality (OAQ) as specified in 40CFR 60.752 (b)(2)(i)(C) demonstrating that off-site migration is being controlled.
- (2) For purposes of compliance with 40CFR 60.753(a), the Permittee shall place each well or design component of a controlled landfill as specified in the approved design plan as provided in 40CFR 60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of five (5) years or more if active or two (2) years or more if closed or at final grade.
- (3) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40CFR 60.753 (d):
- (a) After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40CFR 60.755(d).
 - (b) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from perimeter wells.
 - (c) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of 40CFR60, except that the probe inlet shall be placed within five(5) to ten(10) centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
 - (d) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40CFR 60.755(c)(4)(i) through (v) should be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40CFR 60.753(d).

The location of each monitored exceedance shall be marked and the location recorded.

Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and

the location shall be re-monitored with ten (10) calendar days of detecting the exceedance.

If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within ten (10) days of the second exceedance. If re-monitoring shows a third exceedance for the same location, the action specified in paragraph 40CFR 60.755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in 40CFR 60.755(c)(4)(v) has been taken.

Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 40CFR 60.755(c)(4)(ii) or (iii) shall be re-monitored one (1) month from the initial exceedance. If the one (1)-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one (1)-month re-monitoring shows an exceedance, the actions specified in 40CFR 60.755(c)(4)(iii) or (v) shall be taken.

For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Office of Air Quality (OAQ) for approval.

- (e) The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.
- (4) The Permittee seeking to comply with the provisions of 40CFR 60.755(c) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:
 - (a) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of 40CFR 60, except that "methane" shall replace all references to volatile organic compound (VOC).
 - (b) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
 - (c) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of 40CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of 40CFR 60 shall be used.
 - (d) The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40CFR 60 shall be followed immediately before commencing a surface monitoring survey.
- (5) The provisions of 40CFR 60.755 shall apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction, shall not exceed five (5) days for collection systems and shall not exceed one (1) hour for treatment or control devices.

D.1.10 Calculation of Non-methane Organic Compound (NMOC) Rate [40 CFR 60.754]

The permittee shall design, install, and operate a landfill gas collection and control system as required by 40CFR 60.752(b)(2).

D.1.11 Reporting Requirements [40CFR 60.757]

Pursuant to 40CFR 60.757, except as provided in 40CFR 60.752(b)(2)(i)(B), the Permittee shall:

- (1) Submit a non methane organic compound (NMOC) emission rate report to the Office of Air Quality initially and annually thereafter, except as provided for in 40CFR 60.757(b)(1)(ii) or (b) (3). The Office of Air Quality (OAQ) may request such additional information as may be necessary to verify the reported NMOC emission rate. The report should contain an annual or 5-year estimate of the non methane organic compound (NMOC) emission rate using the formula and procedures provided in 40CFR 60.754 (a) or (b), as applicable. The initial NMOC emission rate report may be combined with the initial design capacity report required in 40CFR 60.757(a) and shall be submitted no later than indicated in 40CFR 60.757(b)(1)(i)(A) and (B). June 10, 1996 for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or ninety days after the date of commenced construction, modification, or reconstruction for landfills that commenced construction, modification, or reconstruction on or after March 12, 1996. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided in 40CFR 60.757(b)(1)(ii) and (b)(3). If the estimated NMOC emission rate as reported in the annual report to the Office of Air Quality (OAQ) is less than 50 megagrams per year in each of the next five (5) consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next five (5) year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Office of Air Quality (OAQ). This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5) year estimate, a revised five (5) year estimate shall be submitted to the Office of Air Quality. The revised estimate shall cover the five (5) year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. The NMOC emission rate report shall include all the data, calculations, sample reports, and measurements used to estimate the annual or five (5) year emission rate. The Permittee is exempted from the requirements of 40CFR 60.757(b)(1) and (2) after the installation of a collection and control system in compliance with 40CFR 60.752 (b)(2), during such time as the system is in operation and in compliance with 40CFR 60.753 and 60.755.
- (2) Submit a collection and control system design plan to the Office of Air Quality (OAQ) within one (1) year of the first non methane organic compound (NMOC) emission rate report, required under 40CFR 60.757(b), in which NMOC emission rate exceeds 50 megagrams (Mg) per year; except if the Permittee elects to recalculate the NMOC emission rate after Tier 2 sampling and analysis as provided in 40CFR 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year. If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40CFR 60.754(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of

40CFR 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Office of Air Quality (OAQ) within one (1) year of the first calculated emission rate exceeding 50 megagrams per year.

- (3) Submit a closure report to the Office of Air Quality (OAQ) within thirty days of waste acceptance cessation. The Office of Air Quality (OAQ) may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40CFR 258.60. If a closure report has been submitted to the Office of Air Quality (OAQ), no additional wastes may be placed into the landfill without filing a notification of modification as described under 40CFR 60.7(a)(4).
- (4) Submit an equipment removal report to the Office of Air Quality (OAQ) thirty (30) days prior to removal or cessation of operation of the control equipment. The equipment removal report shall contain all of the following items: a copy of the closure report submitted in accordance with 40CFR 60.757(d), a copy of the initial performance test report demonstrating that the fifteen (15) year minimum control period has expired, and dated copies of three (3) successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year. The Office of Air Quality (OAQ) may request such additional information as may be necessary to verify that all of the conditions for removal in 40CFR 60.752(b)(2)(v) have been met.
- (5) Annual reports of the following recorded information. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40CFR 60.758(c).
 - (a) Value and length of time for exceedance of applicable parameters monitored under 40CFR 60.756(a), (b), (c), and (d).
 - (b) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40CFR 60.756.
 - (c) Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.
 - (d) All periods when the collection system was not operating in excess of five (5) days.
 - (e) Location of each exceedance of the 500 parts per million methane concentration as provided in 40CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.
 - (f) Date of installation and the location of each well or collection system expansion added pursuant to 40CFR 60.755(a)(3), (b), and (c)(4).
- (6) The Permittee seeking to comply with 40CFR 40.752(b)(2)(iii) shall include the following information with the initial performance test report required under 40CFR 60.8:
 - (a) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion.

- (b) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.
 - (c) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material.
 - (d) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area.
 - (e) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill
 - (f) The provisions for the control of off-site migration.
- (7) A summary of the above information shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

D.1.12 Record Keeping Requirements [326 IAC 12] [40CFR 60.758]

- (1) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to 40 CFR 60.752(b) shall keep for at least five years up-to-date, readily accessible, continuous on-site records of the design capacity report which triggered 40CFR 60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within four (4) hours. Either paper copy or electronic formats are acceptable.
- (2) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment listed in (a) through (d) below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of control device vendor specifications shall be maintained until removal.
 - (a) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(ii):

The maximum expected gas generation flow rate as calculated in 40CFR 60.755(a)(1). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Office of Air Quality (OAQ).

The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40CFR 60.759(a)(1).
 - (b) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

The average combustion temperature measured at least every fifteen (15) minutes and averaged over the same time period of the performance test.

The percent reduction of NMOC determined as specified in 40CFR 60.752(b)(2)(iii)(B) achieved by the control device.

- (c) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.
 - (d) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air -assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.
- (3) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee of a controlled landfill subject to the provisions of this subpart shall keep for five years up-to-date, readily accessible, continuous on-site records of the equipment operating parameters specified to be monitored in 40CFR 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.
 - (a) The following constitute exceedances that shall be recorded and reported under 40CFR 60.757(f):

For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28EC below the average combustion temperature during the most recent performance test at which compliance with 40CFR 60.752(b)(2)(iii) was determined.

For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under 40CFR 60.758(b)(3)(i) of this section
 - (b) The Permittee subject to 40CFR 60.758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40CFR 60.756.
 - (c) The Permittee subject to the provisions of 40CFR 60.758 who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 40CFR 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal or Federal regulatory requirements.)
 - (d) The Permittee seeking to comply with the provisions of 40CFR 60.758 by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

- (4) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
 - (a) The Permittee subject to the provisions of 40CFR 60.758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified in 40CFR 60.755 (b).
 - (b) The Permittee subject to the provisions of 40CFR 60.758 shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40CFR 60.759 (a)(3)(i) as well as any non-productive areas excluded from collection as provided in 40CFR 60.759 (a)(3)(ii).
- (5) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to the provisions of this subpart shall keep for at least five years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.
- (6) Permittees who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

D.1.13 Recordkeeping for NESHAP for Asbestos Active Waste Disposal Sites [40 CFR 61.154]

- (a) For all asbestos containing waste material received, the owner or operator of the active waste disposal site shall:
 - (1) Maintain waste shipment records, using a form similar to that shown in figure 4 of 40 CFR 61, Subpart M, and include the following information
 - (i) The name, address, and telephone number of the waste generator;
 - (ii) The name, address, and telephone number of the transporter(s);
 - (iii) The quantity of the asbestos containing waste material in cubic meters (cubic yards).
 - (iv) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.
 - (v) The date of the receipt.
 - (2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.
 - (3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos

NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

- (4) Retain a copy of all records and reports required by this paragraph for at least 2 years.
- (b) Maintain until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.
- (c) Upon closure, comply with all the provisions of 40 CFR 61.151.
- (d) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.
- (e) Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.
- (f) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:
 - (1) Scheduled starting and completion dates.
 - (2) Reason for disturbing the waste.
 - (3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.
 - (4) Location of any temporary storage site and the final disposal site.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification and a Significant Permit Modification

Source Background and Description

Source Name:	Deercroft Recycling and Disposal Facilities
Source Location:	10501 West 300 North, Michigan City, Indiana 46360
County:	LaPorte
SIC Code:	4953
Operation Permit No.:	T091-7519-00067
Operation Permit Issuance Date:	July 12, 1999
Minor Source Modification No.:	091-16111-00067
Significant Permit Modification No.:	091-16123-00067
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from Deercroft Recycling and Disposal Facilities relating to the construction and operation of the following emission units:

One (1) open flare, with a maximum heat input capacity of 55 MMBtu per hour and the flow rate of 1,800 standard cubic feet per minute (scfm) of landfill gas, constructed in 2002.

History

On June 11, 2001, Deercroft Recycling and Disposal Facility submitted an application to the OAQ requesting to add a 1,800 scfm open flare with a maximum heat input of 55 MMBtu/hr to their existing plant. Currently, the source operates a 1,000 scfm closed flare with a maximum capacity of 30 MMBtu/hr as the emission control system. The new 1,800 scfm open flare will be used as a supplement control system. Deercroft Recycling and Disposal Facility was issued a Part 70 permit (#019-7519-00067) on July 12, 1999.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
Flare I	Open Flare	30	1	1,800	1,400-1,600

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 11, 2002 and July 26, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations on page 1.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	5.22
PM-10	5.22
SO ₂	4.11
VOC	6.68
CO	89.1
NO _x	16.4

HAP's	Potential To Emit (tons/year)
Hydrochloric Acid	5.89
*Other HAPs	5.40
TOTAL	11.29

*Note: The emissions from other HAPs are included in the calculations submitted by the applicant and have been verified and found to be accurate and correct.

Justification for Modification

This modification is being performed through a Part 70 Minor Source Modification pursuant to 326 IAC 2-7-10.5(d)(4)(B) as (1) the potential to emit of NO_x is less than 25 tons per year but greater than 10 tons per year; and (2) potential to emit of CO is less than 100 tons per year but greater than 25 tons per year. The permit modification is being performed through a Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because this is a modification under a provision of Title I of CAA.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment

Pollutant	Status
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) LaPorte County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	2.44
PM-10	2.44
SO ₂	18.6
VOC	41.3
CO	125.4
NO _x	124.8

- (a) This existing source is not a major PSD source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Addendum to the Technical Support Document (TSD) for source's Part 70 permit # 091-7519-00067, issued July 12, 1999.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
1,800 scfm open flare	5.22	5.22	4.11	6.68	89.1	16.4	11.3
Total Emissions of the Existing Source	2.44	2.44	18.6	See Note 1	125.4	124.8	See Note 1
Total Emissions After Modification	7.66	7.66	22.7	6.68	214.5	141.2	11.3
PSD Thresholds	250	250	250	250	250	250	NA

This modification to an existing minor stationary source is not major because the source is going to maintain their PSD minor source status. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Note 1: The VOC and HAPs emissions from the existing source are fugitive emissions and are not counted toward determination of PSD or Emission Offset applicability.

Federal Rule Applicability

- (a) The source is subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.750-759, Subpart WWW) because the municipal solid waste landfill commenced construction, reconstruction or modification or began accepting waste on or after May 30, 1991. The requirements of 40 CFR 60, Subpart WWW previously applied to this landfill and are contained in the Title V permit #091-7519-00067, issued on July 12, 1999. Please see Title V permit for specific requirements of this landfill.

Pursuant to 40 CFR 60.752(b)(2)(ii)(A), if the NMOC emission rate from the landfill site is equal or greater than 50 megagram per year, the owner or operator shall install a control system. The Permittee installed a 1,000 scfm closed flare, which has a maximum heat input of 30 MMBtu/hr, as a control system in 1994. The Permittee proposed to install a new 1,800 scfm open flare as a supplement in 2002.

Pursuant to permit # 091-7519-00067, issued on July 12, 1999 and 40 CFR 60.756, the source using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

- (1) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame
- (2) A device that records flow to or bypass of the flare. The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

There are no specific state rules applicable to this proposed modification.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for compliance demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. Pursuant to 40 CFR 60.756, the source using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
 - (a) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame
 - (b) A device that records flow to or bypass of the flare. The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

This monitoring conditions are necessary to ensure compliance with 40 CFR 60.752 (b)(2)(ii).

Proposed Changes

- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

This stationary source consists of the following emission units:

- (a) One (1) solid waste disposal facility having the meaning described in 40CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul

roads), and improvements on the land used for disposal of solid waste that opened in 1980 and has a design capacity of 8,257,892 Megagrams.

- (b) One (1) flare with a capacity of 30 MMBtu per hour, constructed in 1994.
- (c) Three (3) landfill gas fueled reciprocating engine/generator sets rated at 1138 break horsepower each, installed in 1994, and one (1) landfill gas fueled reciprocating engine/generator set rated at 1138 break horsepower to be installed.
- (d) **One (1) open flare, with a maximum heat input capacity of 55 MMBtu per hour and the flow rate of 1,800 standard cubic feet per minute (scfm) of landfill gas, constructed in 2002.**

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) solid waste disposal facility having the meaning described in 40CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul roads), and improvements on the land used for disposal of solid waste that opened in 1980 and has a design capacity of 8,257,892 Megagrams.
- (b) One (1) flare with a capacity of 30 MMBtu per hour, constructed in 1994.
- (c) Three (3) landfill gas fueled reciprocating engine/generator sets rated at 1138 break horsepower each, installed in 1994, and one (1) landfill gas fueled reciprocating engine/generator set rated at 1138 break horsepower to be installed.
- (d) **One (1) open flare, with a maximum heat input capacity of 55 MMBtu per hour and the flow rate of 1,800 standard cubic feet per minute (scfm) of landfill gas, constructed in 2002.**

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

Deercroft Recycling & Disposal Facility
10501 W. 300 North
Michigan City, IN 46361 Indiana 46360

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary municipal solid waste landfill (MSLWLF)

Responsible Official:	Charlie Hartsell
Source Address:	10501 W. 300 North, Michigan City, IN 46361 Indiana 46360
Mailing Address:	10501 W. 300 North, Michigan City, IN 46361 Indiana 46360
SIC Code:	4953
County Location:	LaPorte
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program

Minor Source, under PSD Rules
Minor Source, Section 112 of the Clean Air Act

The reporting forms have also been revised to show the correct zip code.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 091-16111-00067, and the operation of this proposed modification shall be subject to the Conditions of the proposed Part 70 Significant Permit Modification No. 091-16123-00067.

Appendix A: Emission Calculations Landfill Gas Combustion

From the 1,800 scfm flare

Company Name: Deercroft Recycling and Disposal Facility
Address City IN Zip: 10501 West 300 North, Michigan City, IN 46360
MSM #: 091-16111-00067
Reviewer: ERG/YC
Date: June 21, 2002

Fuel Input
MMBtu/hr

Flow Rate
scfm

55.0

1800

	Pollutant						
	PM ^a	PM10 ^a	SO ₂	NOx ^b	NMOC ^d	CO ^b	HCl ^c
Emission Factor in lb/MMBtu	177.0 (ug/dsl)	177.0 (ug/dsl)	49.6 ^c (ppmv)	0.07 (lbs/MMBtu)	4000.00 (ppmv)	0.37 (lbs/MMBtu)	126.4 ^c (ppmv)
Potential Emission in tons/yr	5.22	5.22	4.11	16.38	6.68	89.13	5.89

^a Emission Factors are from AP-42, Chapter 13.5 - Industrial Flares -Table 13.5-1 - Soot for average smoke flare (AP-42, 01/95).

Assume PM emissions equal to PM10 emissions.

^b Emission Factors are from AP-42, Chapter 13.5 - Industrial Flares, Table 13.5-1 (AP-42, 01/95)

^c The total inlet concentration of Sulfur/Chloride content compounds in AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Table 2.4-1 (AP-42, 11/98)

^d The default NMOC value in the Landfill Air Emission Estimation Model. Assume all the NMOC is Hexane.

Methodology

PM/PM10 Emissions (tons/yr) = Flow Rate (scfm) x 60 (min/hr) x 28.317 (l/scf) x Emission Factor (ug/dsl) x 1g/1000000 ug x 1 lbs/454 g x 8760 (hr/yr) x 1 ton/2000 lbs

SO₂ Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7032 atm-cf/lb mole-R) / Temp (60F+ 460)

x Mole weight of SO₂ (64 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs

NOx/CO Emissions (tons/yr) = Max. Heat Input (MMBtu/hr) x Emission Factor (lbs/MMBtu) x 8760 hr/yr x 1 ton/2000 lbs

NMOC/HCl Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7032 atm-cf/lb mole-R) / Temp (60F+ 460)

x Mole weight of Hexane/HCl (lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x 75% collection efficiency x (1-98% control efficiency)